

WHAT IS CLAIMED IS:

5 1. Isolated DNA coding for the *MmeI* restriction
enzyme, wherein the isolated DNA is obtainable from
Methylophilus methylotrophus.

10 2. A recombinant DNA vector comprising a vector
into which a DNA segment coding for the *MmeI* has been
inserted.

15 3. Isolated DNA coding for the *MmeI* endonuclease
and *MmeI*/methyltransferase, wherein the isolated DNA is
obtainable from ATCC Accession No. PTA-4521.

 4. Vectors that comprise the isolated DNA of
claim 3.

20 5. A host cell transformed by the vector of claim
2 or 4.

25 6. A method of producing recombinant *MmeI*
restriction endonuclease and *MmeI* methylase comprising
culturing a host cell transformed with the vector of
claims 2 or 4 under conditions suitable for expression
of said endonuclease and methylase.

30 7. Isolated DNA coding for an *MmeI*-like restriction
enzyme, wherein said isolated DNA hybridizes to at least
one conserved motif of the nucleotide sequence coding
for the *MmeI* restriction enzyme under predetermined
conditions.